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Version 1.0

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device is in conformity with the following EC/EMC directives:

- ❑ **EN 55022** Limits and methods of mesurement of radio disturbance characteristics of information technology equipment
- ❑ **EN 61000-3-2** Disturbances in supply systems caused
- ❑ **EN 61000-3-3** Disturbances in supply systems caused by household appliances and similar electrical equipment " Voltage fluctuations"
- ❑ **EN 55024** Information technology equipment-Immunity characteristics-Limits and methods of measurement
- ❑ **EN 60950** Safety for information technology equipment including electrical business equipment
- ❑ **CE marking** CE

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilieur du Canada.

About the Manual

The manual consists of the following:

Chapter 1 **Introducing the Motherboard**	Describes features of the motherboard.	⇨ page 1
Chapter 2 **Installing the Motherboard**	Describes installation of motherboard components.	⇨ page 7
Chapter 3 **Using BIOS**	Provides information on using the BIOS Setup Utility.	⇨ page 23
Chapter 4 **Using the Motherboard Software**	Describes the motherboard software.	⇨ page 51
Chapter 5 **Trouble Shooting**	Provides basic trouble shooting tips.	⇨ page 55

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Chapter 1
Introducing the Motherboard

Introduction

Thank you for choosing the **BAT-I** motherboard. This motherboard is a high performance, enhanced function. This motherboard has onboard Intel® Bay Trail-D J1750/J1800/J1850/J1900/J2850/J2900 SOC for high-end business or personal desktop markets.

It supports up to 8 GB of system memory with single channel DDR3 1333MHz SO-DIMM. It supports one PCI Express x1 slot, is fully compliant to PCI Express 2.0 standard. And one mini PCI Express slot for extending usage is supported (the mini PCIE supports half-card and you can install a wireless card for it).

It implements an EHCI (Enhanced Host Controller Interface) compliant interface that provides six USB 2.0 ports (four USB 2.0 ports at the rear panel and one USB 2.0 header supports additional two USB 2.0 ports) and one USB 3.0 port (one USB 3.0 port at the rear panel).

The motherboard is equipped with advanced full set of I/O ports in the rear panel, including PS/2 Keyboard & PS/2 Mouse connectors, one USB 3.0 port, four USB 2.0 ports, one RJ45 LAN connector, one HDMI port, one D-sub (VGA) port and audio jacks for line-in, line-out and mircophone.

In addition, this motherboard supports two SATA 3Gb/s connectors for expansion.

Package Contents

Your motherboard package ships with the following items:

- ❑ BAT-I Motherboard
- ❑ User Manual
- ❑ DVD
- ❑ I/O Shield
- ❑ 2 SATA Cables

Accessories may vary, please refer to actual goods you purchase.

Specifications

SOC	• Onboard Intel® Bay Trail-D J1750/J1800/J1850/J1900/J2850/J2900 SOC *Note: Please go to ECS website for the latest CPU support list.*
Memory	• Signal channel DDR3 SO-DIMM memory architecture • 1 x 204-pin DDR3 SO-DIMM socket supports up to 8 GB • Supports DDR3 1333 MHz DDR3 SDRAM *Note: Please go to ECS website for the latest Memory support list.*
Expansion Slots	• 1 x PCI Express x1 slot • 1 x mini PCI Express slot (the mini PCIE (half-card) supports extension cards with PCIE signal)
Storage	• Supported by Intel® Bay Trail-D J1750/J1800/J1850/J1900/J2850/J2900 SOC - 2 x Serial ATA 3Gb/s devices
Audio	• VIA VTI1705CF - 6 Channel High Definition Audio Codec - Compliant with HD audio specification
LAN	• Realtek 8111G(or RTL8106E) Gigabit LAN
Rear Panel I/O	• 1 x PS/2 Keyboard & PS/2 Mouse connectors • 1 x USB 3.0 port • 4 x USB 2.0 ports • 1 x RJ45 LAN connector • 1 x HDMI port • 1 x D-sub (VGA) port • 1 x Audio port (1 x line-in, 1 x line-out, 1 x Microphone)
Internal I/O Connectors & Headers	• 1 x 24-pin ATX Power Supply connector • 1 x 4-pin CPU_FAN connector • 1 x 4-pin SYS_FAN connector • 1 x USB 2.0 header supports additional two USB 2.0 ports • 2 x Serial ATA 3Gb/s connectors • 1 x SPK header • 1 x Front Panel switch/LED header • 1 x Front Panel audio header • 1 x Clear CMOS jumper • 1 x LVDS select jumper (LCD_PWR) (Optional) • 1 x LVDS connector (Optional) • 1 x LVDS brightness control header (DISP_BRT) (Optional) • 1 x LPT header • 2 x COM headers
System BIOS	• AMI BIOS with 64Mb SPI Flash ROM - Supports Plug and Play - Supports ACPI & DMI - Supports S1 / STR (S3) /STD (S4) - Supports Hardware monitor - Audio, LAN, can be disabled in BIOS

	- F7 hot key for boot up devices option - Supports PgUp clear CMOS Hotkey (Has PS2 KB Model only) - Supports Dual/Triple Display - Supports EZ BIOS (1024x768 resolution, GUI UEFI) - Supports Multi-Language - Supports AC'97/HD Audio auto detect (default)
Ap/ Bundled Software Support	• Supports eBLU*1/eDLU • 3rd Party Bundled Software: Cyberlink*2 /Norton*2/Muzee*2 *Note: *1Microsoft .NET Framework 3.5 is required.* **2Free bundle software is including ECS DVD: Cyberlink/ Norton/Muzee*
Form Factor	• Mini ITX Size, 170mm x 170mm

Motherboard Components

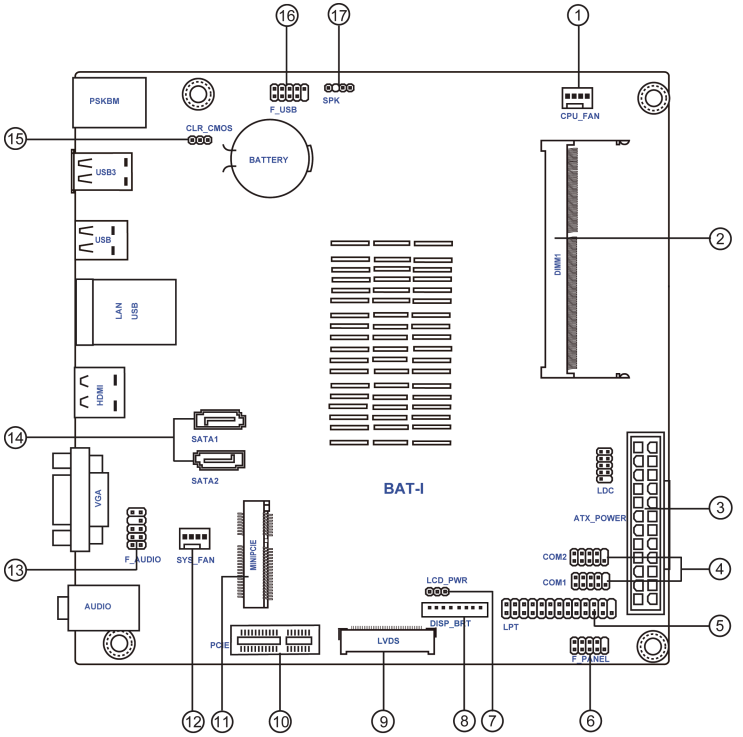
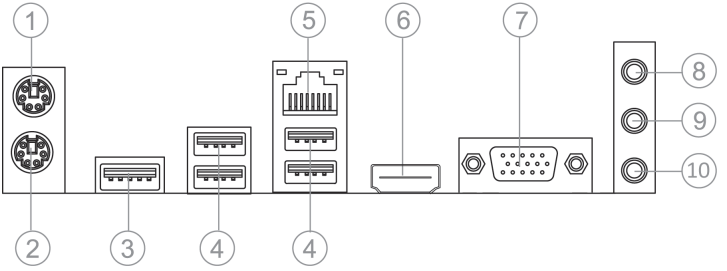


Table of Motherboard Components

LABEL	COMPONENTS
1. CPU_FAN	4-pin CPU cooling fan connector
2. DIMM1	204-pin DDR3 SDRAM SO-DIMM
3. ATX_POWER	Standard 24-pin ATX power connector
4. COM1~2	Onboard serial port headers
5. LPT	Onboard parallel port header
6. F_PANEL	Front panel switch/LED header
7. LCD_PWR	LVDS select jumper (Optional)
8. DISP_BRT	LVDS brightness control header (Optional)
9. LVDS	LVDS connector (Optional)
10. PCIE	PCI Express x 1 slot
11. MINIPCIE	mini PCIE (half card) slot
12. SYS_FAN	4-pin system cooling fan connector
13. F_AUDIO	Front panel audio header
14. SATA1~2	Serial ATA 3Gb/s connectors
15. CLR_CMOS	Clear CMOS jumper
16. F_USB	Front panel USB 2.0 header
17. SPK	Speaker header

I/O Ports



1. PS/2 Mouse (green)
Use the upper PS/2 port to connect a PS/2 mouse.

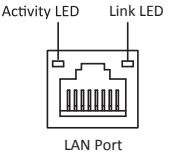
2. PS/2 Keyboard (purple)
Use the lower PS/2 port to connect a PS/2 keyboard.

3. USB 3.0 Port
Use the USB 3.0 port to connect USB 3.0 device.

4. USB 2.0 Ports
Use the USB 2.0 ports to connect USB 2.0 devices.

5. LAN Port
Connect an RJ-45 jack to the LAN port to connect your computer to the Network.

LAN LED	Status	Description
Activity LED	OFF	No data
	Orange blinking	Active
Link LED	OFF	No link
	Green	Link



6. HDMI Port
You can connect the display device to the HDMI port.

7. VGA Port
Connect your monitor to the VGA port.

8. Line-in (blue)
It can be connected to an external CD/DVD player, Tape player or other audio devices for audio input.

9. Line-out (lime)
It is used to connect to speakers or headphones.

10. Microphone (pink)
It is used to connect to a microphone.

Chapter 2
Installing the Motherboard

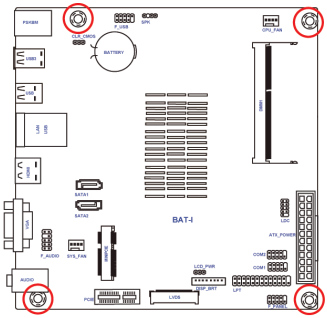
2-1. Safety Precautions

Follow these safety precautions when installing the motherboard:

- Wear a grounding strap attached to a grounded device to avoid damage from static electricity.
- Discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard.
- Leave components in the static-proof bags.
- Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.

2-2. Installing the motherboard in a Chassis

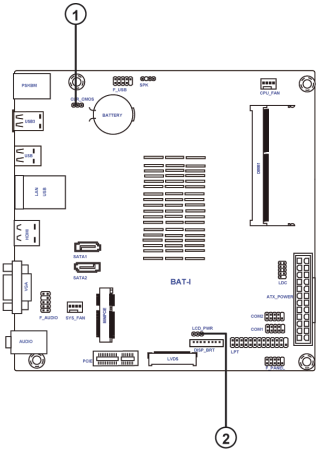
This motherboard carries a Mini ITX form factor of 170 x 170 mm. Choose a chassis that accommodates this form factor. Make sure that the I/O template in the chassis matches the I/O ports installed on the rear edge of the motherboard. Most system chassis have mounting brackets installed in the chassis, which corresponds to the holes in the motherboard. Place the motherboard over the mounting brackets and secure the motherboard onto the mounting brackets with screws.



Do not over-tighten the screws as this can stress the motherboard.

2-3. Checking Jumper Settings

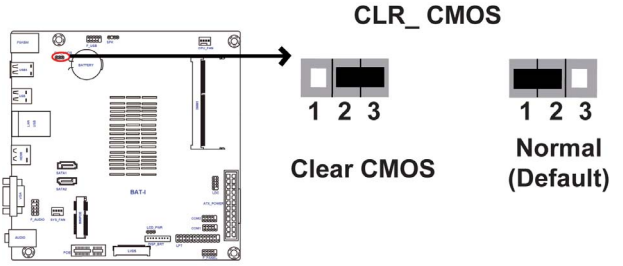
This section explains how to set jumpers for correct configuration of the motherboard.



No.	Components
1	CLR_CMOS
2	LCD_PWR

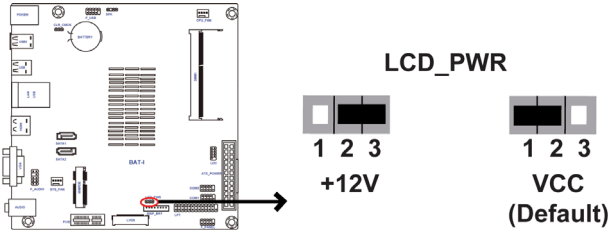
1. CLR_CMOS: Clear CMOS Jumper

The following illustration shows the location of the motherboard jumpers. Pin 1 is labeled.



To avoid the system instability after clearing CMOS, we recommend users to enter the main BIOS setting page to "Load Default Settings" and then "Save and Exit Setup".

2. LCD_PWR: LVDS Select Jumper (Optional)

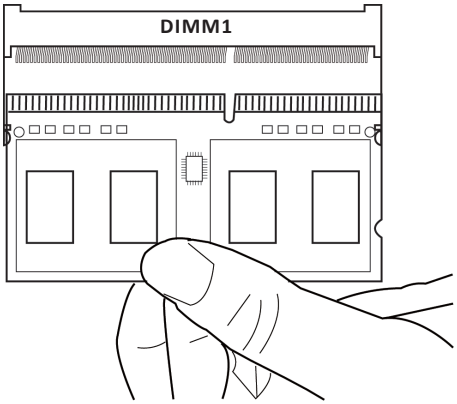


2-4. Installing Hardware

2-4-1. Installing Memory Modules

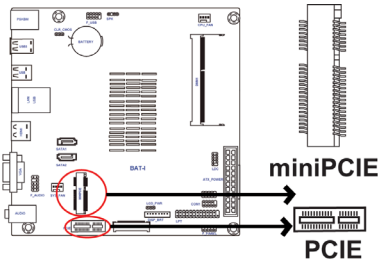
- This motherboard accommodates one memory module. It can support one 204-pin DDR3 1333/1066.
- Do not remove any memory module from its antistatic packaging until you are ready to install it on the motherboard. Handle the modules only by their edges. Do not touch the components or metal parts. Always wear a grounding strap when you handle the modules.
- You must install one module in the slot. Total memory capacity is 8 GB.
- Refer to the following to install the memory modules.

Install the DIMM module into the slot and press it firmly down until it seats correctly. Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot.



2-4-2. Installing Add-on Cards

The slots on this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a means of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.



PCIE Slot The PCI Express x1 slot is fully compliant to the PCI Express Base Specification revision 2.0.

miniPCIE Slot The mini PCIE (half-card) supports extension cards with PCIE signal.

Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

Follow these instructions to install an add-on card:

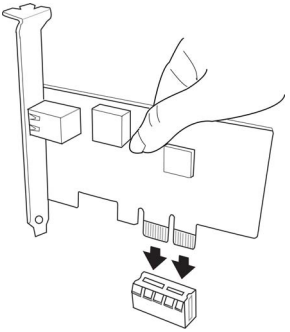
1 Remove a blanking plate from the system case corresponding to the slot you are going to use.

2 Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.

3 Secure the metal bracket of the card to the system case with a screw.

For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

Please refer the following illustrations to install the add-on card:

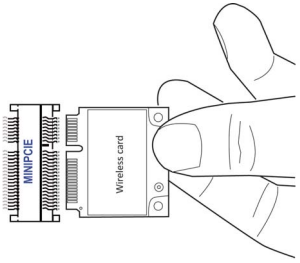


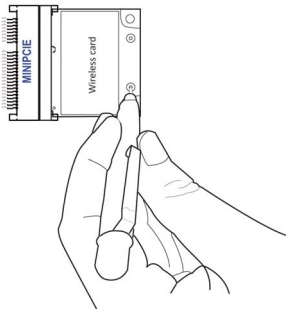
Install the LAN Card in the PCIE X1 slot

Follow these instructions to install a wireless card or TV tuner card:

1 Insert a wireless card or TV tuner card into the miniPCIE Slot.

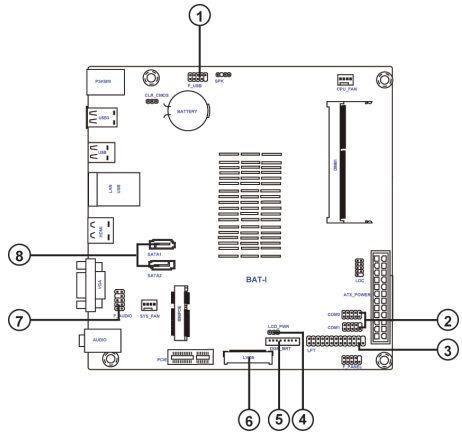
2 Lower the handle and tighten the screws.





2-4-3. Connecting Optional Devices

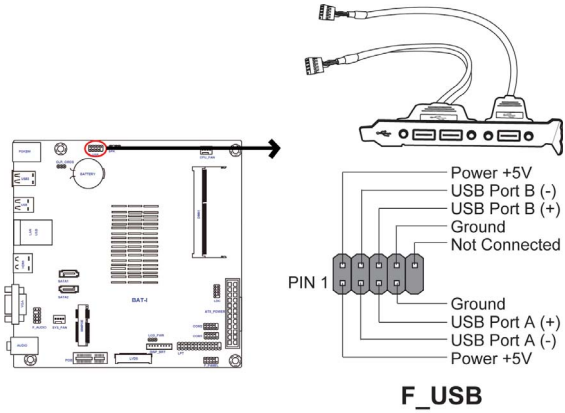
Refer to the following for information on connecting the motherboard's optional devices:



No.	Components	No.	Components
1	F_USB	5	LVDS
2	COM1~2	6	F_AUDIO
3	LPT	7	SATA1~2
4	DISP_BRT	~	~

1. F_USB: Front Panel USB 2.0 Header

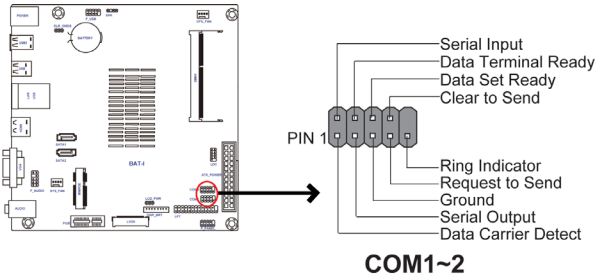
The motherboard has one USB 2.0 header supporting two USB 2.0 ports. Additionally, some computer cases have USB 2.0 ports at the front of the case. If you have this kind of case, use auxiliary USB 2.0 connector to connect the front-mounted ports to the motherboard.



Please make sure that the USB cable has the same pin assignment as indicated above. A different pin assignment may cause damage or system hang-up.

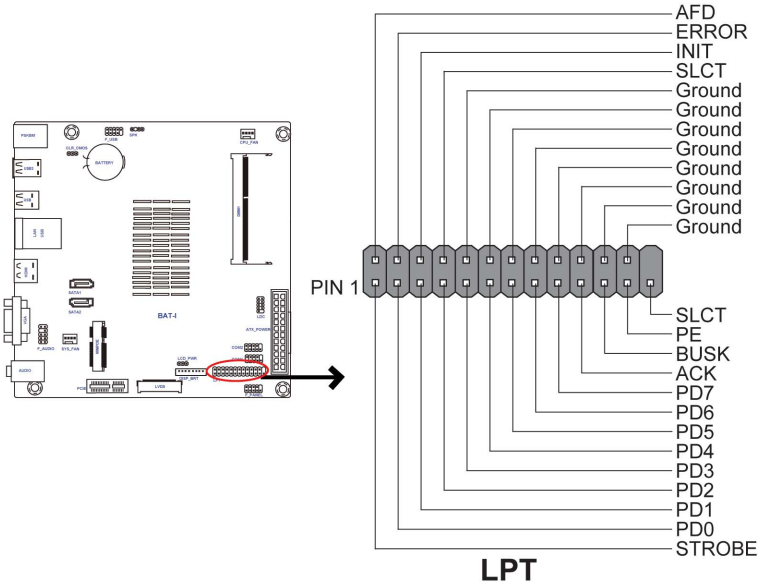
2. COM1~2: Onboard Serial Port Headers

Connect serial port extension brackets to these headers to add serial ports to your system.

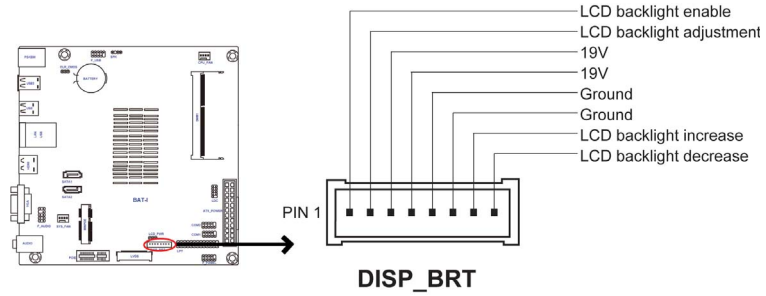


3. LPT: Onboard Parallel Port Header

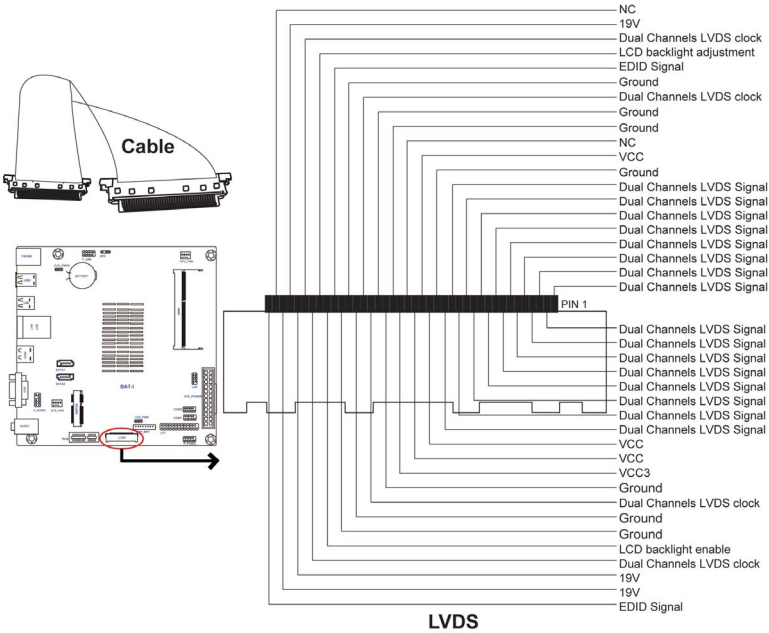
This header can be used to connect to the printer, scanner or other devices.



4. DISP_BRT: LVDS Brightness Control Header (Optional)



5. LVDS: LVDS Connector (Optional)

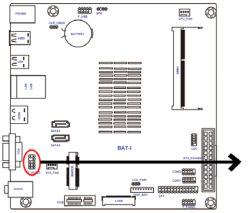


1. You can connect the large end of the cable to the LED panel, and connect the other small end to the slot on the motherboard.

2. Due to the chipset limitation, using dual displays LVDS(AIO) + VGA or LVDS(AIO) + HDMI will cause the problem that you may not enter BIOS setup or have the display problem.

6. F_AUDIO: Front Panel Audio Header

The front panel audio header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access. This header supports HD audio by default. If you want connect an AC' 97 front panel audio to HD onboard headers, please set as below picture.



HD Audio

Sense2_Return		Left channel to front panel
		Sense_Send
Sense1_Return		Right channel to front panel
Presence#		Microphone power
Analog ground		Front panel microphone input signal

PIN 1

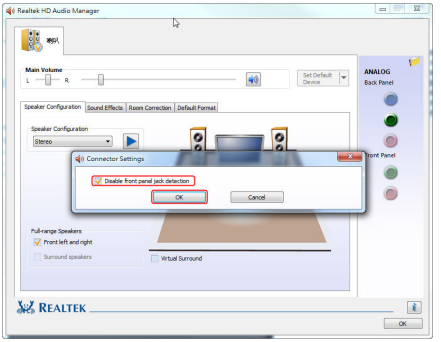
AC' 97 Audio

Left channel return from front panel		Left channel to front panel
		RSVD
Right channel return from front panel		Right channel to front panel
Analog power (+5V)		Microphone power
Analog ground		Front panel microphone input signal

PIN 1

AC' 97 Audio Configuration: To enable the front panel audio connector to support AC97 Audio mode.

If you use AC' 97 Front Panel, please tick off the option of "Disabled Front Panel Detect ". If you use HD Audio Front Panel, please don' t tick off "Disabled Front Panel Detect ".



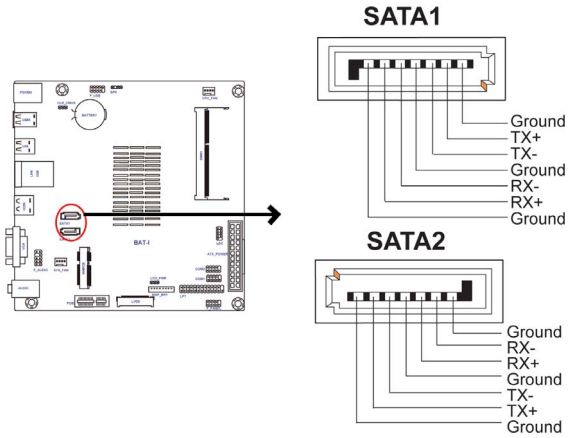
** For reference only*

If you use AC' 97 Front Panel, please don' t tick off "Using Front Jack Detect ". If you use HD Audio Front Panel, please tick off the option of "Using Front Jack Detect ".

** For reference only*

7. SATA1~2: Serial ATA Connectors

SATA 1~2 connectors support the Serial ATA 3Gb/s device, simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.



2-4-4. Installing a SATA Hard Drive

This section describes how to install a SATA Hard Drive.

About SATA Connectors

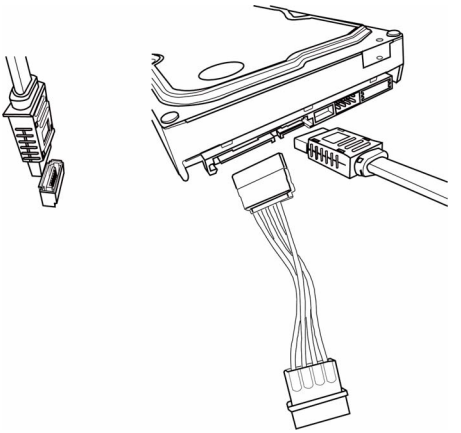
Your motherboard features two SATA connectors supporting a total of two drives. SATA refers to Serial ATA (Advanced Technology Attachment) is the standard interface for the IDE hard drives which are currently used in most PCs. These connectors are well designed and will only fit in one orientation. Locate the SATA connectors on the motherboard and follow the illustration below to install the SATA hard drives.

Installing Serial ATA Hard Drives

To install the Serial ATA (SATA) hard drives, use the SATA cable that supports the Serial ATA protocol. This SATA cable comes with a SATA power cable. You can connect either end of the SATA cable to the SATA hard drive or the connector on the motherboard.

Refer to the illustration below for proper installation:

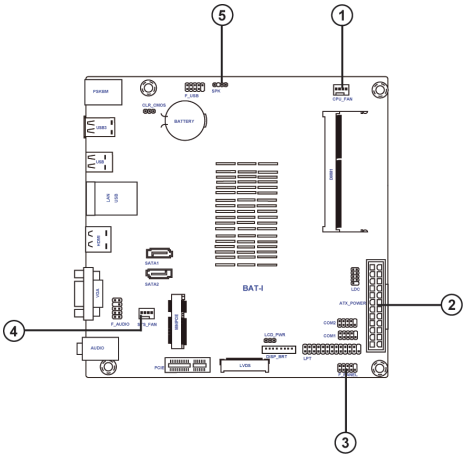
1 Attach either cable end to the connector on the motherboard.
2 Attach the other cable end to the SATA hard drive.
3 Attach the SATA power cable to the SATA hard drive and connect the other end to the power supply.



** For reference only*

2-4-5. Connecting Case Components

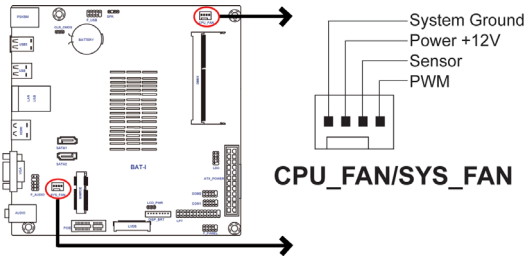
After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:



No.	Components	No.	Components
1	CPU_FAN	4	SYS_FAN
2	ATX_POWER	5	SPK
3	F_PANEL	~	~

1 & 4. CPU_FAN (CPU Cooling FAN Power Connector) & SYS_FAN (System Cooling FAN Power Connector)

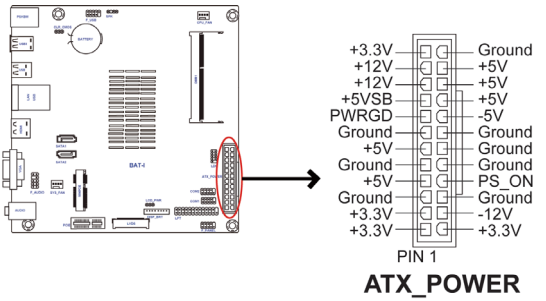
Connect the CPU cooling fan cable to **CPU_FAN**.
Connect the system cooling fan connector to **SYS_FAN**.



Users please note that the fan connector supports the CPU cooling fan of 1.1A ~ 2.2A (26.4W max) at +12V.

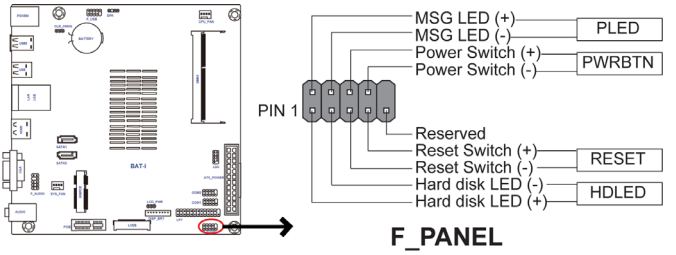
2. ATX_POWER: ATX 24-pin Power Connector

Connect the standard power supply connector to **ATX_POWER**.



3. F_PANEL: Front Panel Header

The front panel header (F_PANEL) provides a standard set of switch and LED headers commonly found on ATX or Micro ATX cases. Refer to the table below for information:



Hard Drive Activity LED

Connecting pins 1 and 3 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.

Power/Sleep/Message waiting LED

Connecting pins 2 and 4 to a single or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.

Reset Switch

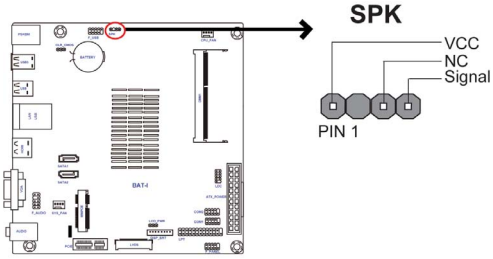
Supporting the reset function requires connecting pin 5 and 7 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.

Power Switch

Supporting the power on/off function requires connecting pins 6 and 8 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50 ms to signal the power supply to switch on or off. The time requirement is due to internal de-bounce circuitry. After receiving a power on/off signal, at least two seconds elapses before the power supply recognizes another on/off signal.

5. SPK: SPK Header

Connect the case speaker cable to **SPK**.



This concludes Chapter 2. The next chapter covers the BIOS.

Memo

Chapter 3
Using BIOS

About the Setup Utility

The computer uses the latest "American Megatrends Inc. " BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

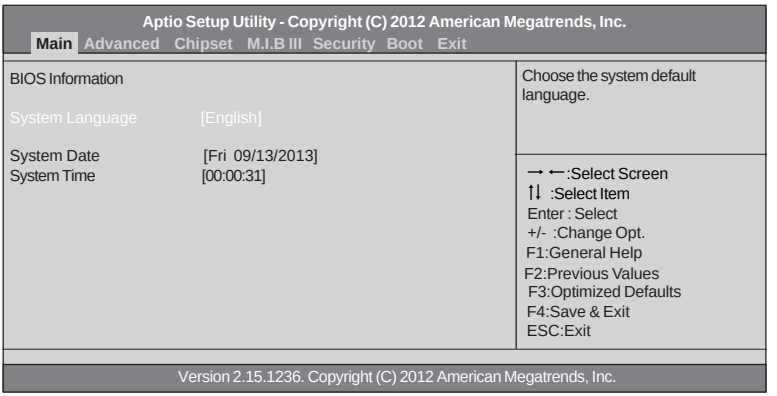
- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

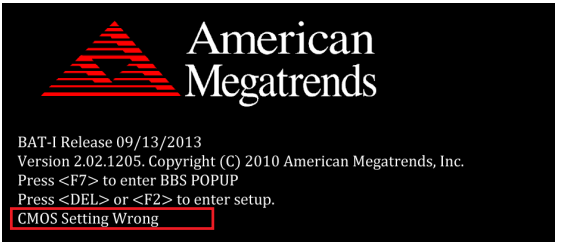
Press the delete key to access BIOS Setup Utility.



Resetting the Default CMOS Values

When powering on for the first time, the POST screen may show a "CMOS Settings Wrong" message. This standard message will appear following a clear CMOS data at factory by the manufacturer. You simply need to Load Default Settings to reset the default CMOS values.

Note: Changes to system hardware such as different CPU, memories, etc. may also trigger this message.


American Megatrends
BAT-I Release 09/13/2013
Version 2.02.1205. Copyright (C) 2010 American Megatrends, Inc.
Press <F7> to enter BBS POPUP
Press <DEL> or <F2> to enter setup.
CMOS Setting Wrong

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle▶) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle▶ .

The default BIOS setting for this motherboard apply for most conditions with optimum performance. We do not suggest users change the default values in the BIOS setup and take no responsibility to any damage caused by changing the BIOS settings.

BIOS Navigation Keys

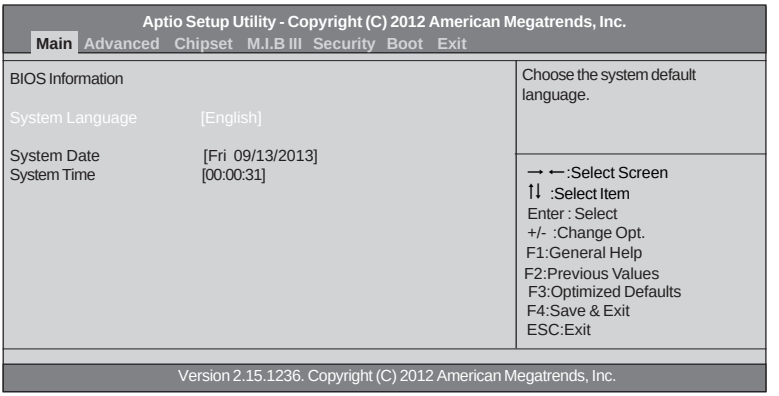
The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
↑↓→←	Scrolls through the items on a menu
+/-	Modifies the selected field's values
Enter	Select
F1	General Help
F2	Previous Values
F3	Optimized Defaults
F4	Save & Exit

For the purpose of better product maintenance, the manufacture reserves the right to change the BIOS items presented in this manual. The BIOS setup screens shown in this chapter are for reference only and may differ from the actual BIOS. Please visit the manufacture's website for updated manual.

Main Menu

When you enter the BIOS Setup program, the main menu appears, giving you an overview of the basic system information. Select an item and press <Enter> to display the submenu.



System Language (English)

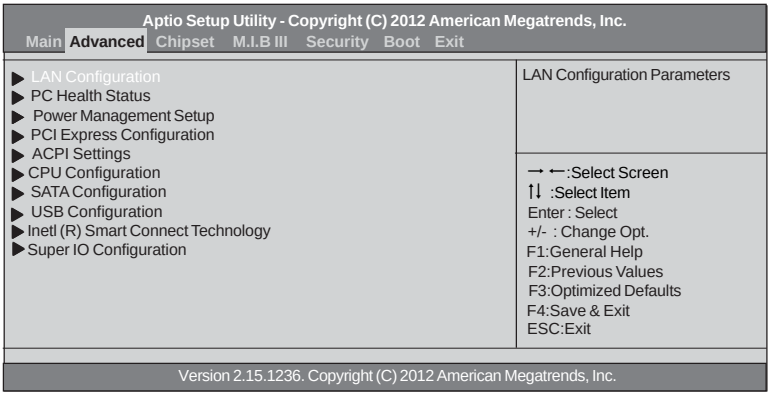
This item is used to set the language.

System Date & Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

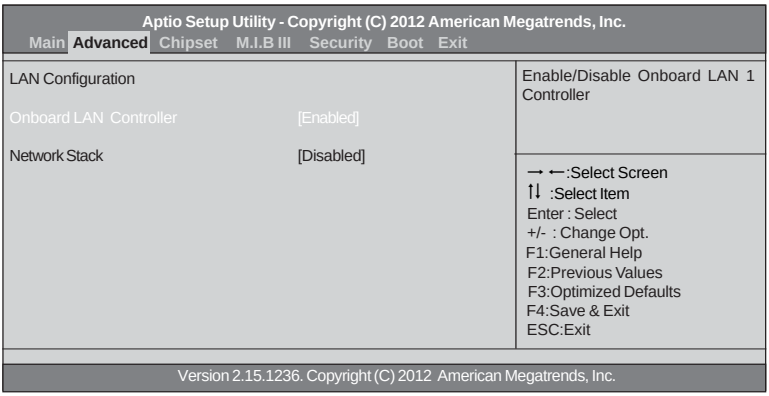
Advaned Menu

The Advanced menu items allow you to change the settings for the CPU and other system.



▶LAN Configuration

The item in the menu shows the LAN-related information that the BIOS automatically detects.



Onboard LAN Controller (Enabled)

Use this item to enable or disable the Onboard LAN.

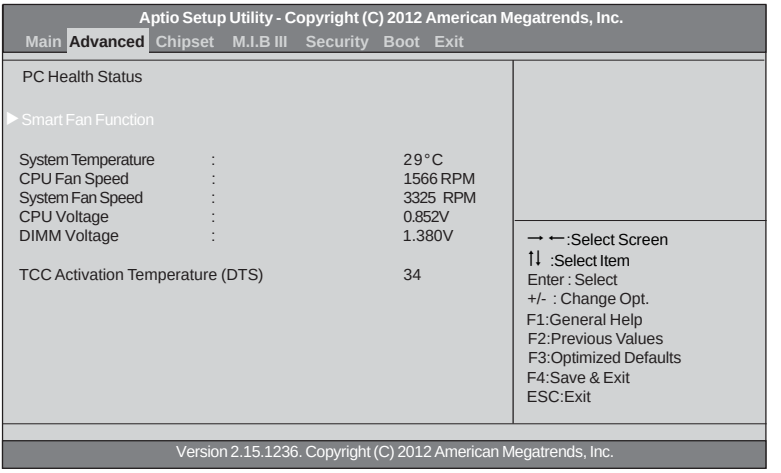
Network Stack (Disabled)

Use this item to enable or disable the UEFI Network Stack.

Press <Esc> to return to the Advanced Menu page.

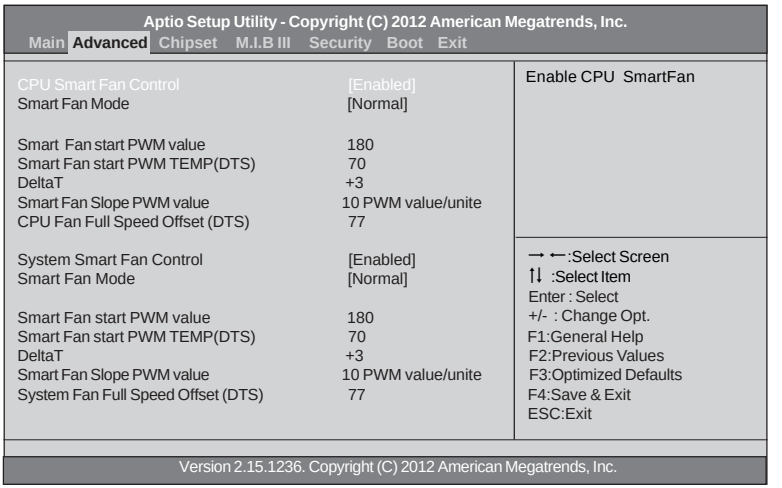
►PC Health Status

On motherboards support hardware monitoring, this item lets you monitor the paremeters for critical voltages, temperatures and fan speeds.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
PC Health Status
► Smart Fan Function
System Temperature : 29°C
CPU Fan Speed : 1566 RPM
System Fan Speed : 3325 RPM
CPU Voltage : 0.852V
DIMM Voltage : 1.380V
TCC Activation Temperature (DTS) 34
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

►Smart Fan Function

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
CPU Smart Fan Control [Enabled]
Smart Fan Mode [Normal]
Smart Fan start PWM value 180
Smart Fan start PWM TEMP(DTS) 70
DeltaT +3
Smart Fan Slope PWM value 10 PWM value/unite
CPU Fan Full Speed Offset (DTS) 77
System Smart Fan Control [Enabled]
Smart Fan Mode [Normal]
Smart Fan start PWM value 180
Smart Fan start PWM TEMP(DTS) 70
DeltaT +3
Smart Fan Slope PWM value 10 PWM value/unite
System Fan Full Speed Offset (DTS) 77
Enable CPU SmartFan
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

CPU/System Smart FAN Control (Enabled)

This item allows you to enable or disable the control of the CPU/system fan speed by changing the fan voltage.

Smart Fan Mode (Normal)

This item allows you to select the fan mode (Normal, Quiet, Silent, or Manual) for a better operation environment. If you choose Normal mode, the fan speed will be auto adjusted depending on the CPU temperature. If you choose Quite mode, the fan speed will be auto minimized for quiet environment. If you choose Silent mode, the fan speed will be auto restricted to make system more quietly. If you choose Manual mode, the fan speed will be adjust depending on users' parameters.

Smart Fan start PWM value (180)

This item is used to set the start PWM value of the smart fan.

Smart Fan start TEMP(DTS) (70)

This item is used to set the start temperature of the smart fan.

DeltaT (+3)

This item specifies the range that controls CPU temperature and keeps it from going so high or so low when smart fan works.

Smart Fan Slope PWM value (10 PWM value/unite)

This item is used to set the Slope Select PWM of the smart fan.

CPU/System Fan Full Speed Offset(DTS) (77)

This item is used to set the CPU/system fan full speed offset value.

Press <Esc> to return to the PC Health Status page.

System Component Characteristics

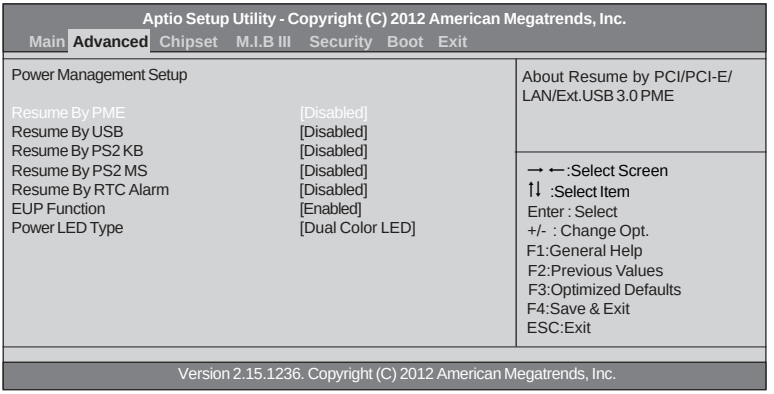
These items display the monitoring of the overall inboard hardware health events, such as System & CPU temperature, CPU & DIMM voltage, CPU & system fan speed,... etc.

- System Temperature
- CPU Fan Speed
- System Fan Speed
- CPU Voltage
- DIMM Voltage

Press <Esc> to return to the Advanced Menu page.

►Power Management Setup

This page sets up some parameters for system power management operation.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Power Management Setup
Resume By PME [Disabled]
Resume By USB [Disabled]
Resume By PS2 KB [Disabled]
Resume By PS2 MS [Disabled]
Resume By RTC Alarm [Disabled]
EUP Function [Enabled]
Power LED Type [Dual Color LED]
About Resume by PCI/PCI-E/ LAN/Ext.USB 3.0 PME
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

Resume By PME (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the PCI/PCI-E Modem or PCI/PCI-E LAN card. You must use an ATX power supply in order to use this feature. Use this item to do wake-up action if inserting the PCI/PCI-E card.

Resume By USB (Disabled)

This item allows you to enable or disable the USB device wakeup function from S3 mode.

Resume By PS2 KB (Disabled)

This item enables or disables you to allow keyboard activity to awaken the system from power saving mode.The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time basedon the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

Resume By PS2 MS (Disabled)

This item enables or disables you to allow mouse activity to awaken the system from power saving mode.

Resume By RTC Alarm (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

EUP Function (Enabled)

This item allows user to enable or disable EUP support.

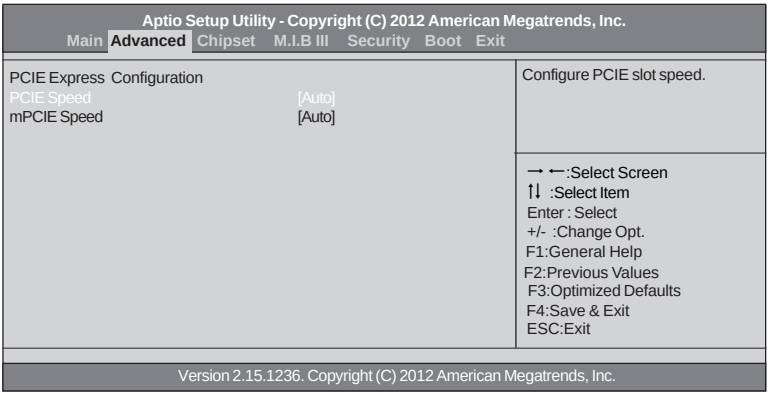
Power LED Type (Dual Color LED)

This item shows the type of the Power LED.

Press <Esc> to return to the Advanced Menu page.

▶PCI Express Configuration

The item in the menu shows the information of PCI Express Configuration.



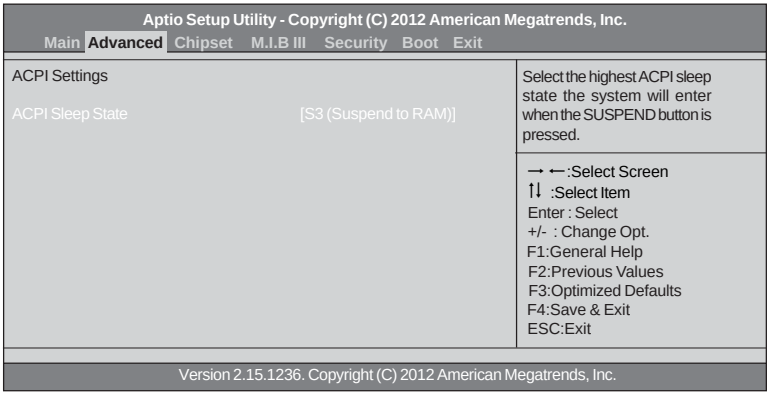
PCIE/mPCIE Speed (Auto)

This item allows user to configure the PCIE/mPCIE speed.

Press <Esc> to return to the Advanced Menu page.

▶ACPI Configuration

The item in the menu shows the highest ACPI sleep state when the system enters suspend.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
ACPI Settings
ACPI Sleep State [S3 (Suspend to RAM)]
Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

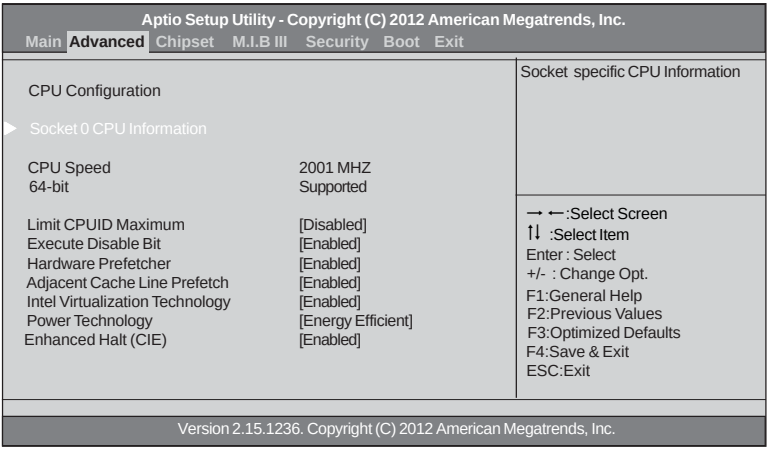
ACPI Sleep State (S3(Suspend to RAM))

This item allows user to enter the ACPI S3 (Suspend toRAM) Sleep State(default).

Press <Esc> to return to the Advanced Menu page.

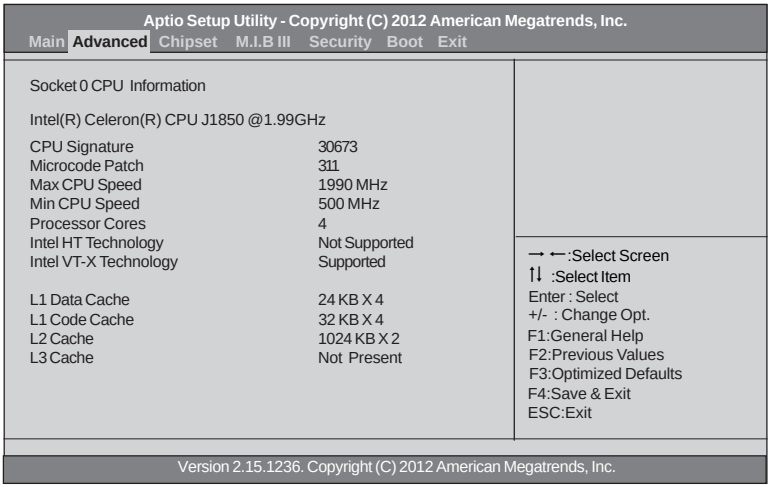
▶CPU Configuration

The item in the menu shows the CPU information.



▶Socket 0 CPU Information

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Socket 0 CPU Information
Intel(R) Celeron(R) CPU J1850 @1.99GHz
CPU Signature 30673
Microcode Patch 311
Max CPU Speed 1990 MHz
Min CPU Speed 500 MHz
Processor Cores 4
Intel HT Technology Not Supported
Intel VT-X Technology Supported
L1 Data Cache 24 KB X 4
L1 Code Cache 32 KB X 4
L2 Cache 1024 KB X 2
L3 Cache Not Present
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

Intel(R) Celeron(R) CPU J1850 @ 1.99GHZ

This is display-only field and displays the information of the CPU installed in your computer.

CPU Signature (30673)

This item shows the information of the CPU signature.

Microcode Patch (311)

This item shows the version of Microcode patch.

Max CPU Speed (1990 MHz)

This item shows the max speed of the CPU.

Min CPU Speed (500 MHz)

This item shows the min speed of the CPU.

Processor Cores (4)

This item shows the number of cores of the processor.

Intel HT Technology (Not Supported)

This item shows the computer supports Intel HT technology or not.

Intel VT-X Technology (Supported)

This item shows the computer supports Intel VT-X technology or not.

L1 Data Cache (24 KB X 4)

This item shows the size of CPU L1 Data Cache memory.

L1 Code Cache (32 KB X 4)

This item shows the size of CPU L1 Code Cache memory.

L2/L3Cache (1024 KB X2/Not present)

These items show the size of CPU L2/L3 Cache memory.

Press <Esc> to return to the CPU Configuration page.

CPU Speed (2001MHZ)

This item shows the processor speed.

64-bit (Supported)

This item shows the CPU installed in your computer support 64-bit or not.

Limit CPUID Maximum (Disabled)

Use this item to enable or disable the maximum CPUID value limit, you can enable this to prevent the system from “rebooting” when trying to install Windows NT 4.0.

Excute Disable Bit (Enabled)

This item allows the processor to classify areas in memory by where application code can execute and where it cannot. When a malicious worm attempts to insert code in the buffer, the processor disables code execution, preventing damage or worm propagation. Replacing older computers with Execute Disable Bit enabled systems can halt worm attacks, reducing the need for virus related repair.

Hardware Prefetcher (Enabled)

If you enable this item, the processor fetches data and instructions from the memory into the cache that are likely to be required in the near future. This reduces the latency associated with memory reads.

Adjacent Cache Line Prefetch (Enabled)

If you enable this item, the processor fetches the currently requested cache line, as well as the subsequent cache line. This reduces the cache latency by making the next cache line immediately avaiable if the processor requires it as well.

Intel Virtualization Technology (Enabled)

When enabled, a VMM can utilize the additional hardware capabilities provided by Vandor Pool Technology.

Power Technology (Energy Efficient)

This item enables or disables the power management features.

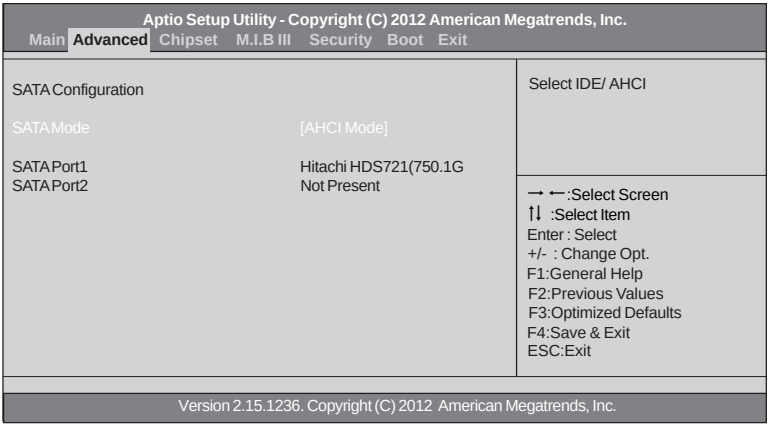
Enhanced Halt (CIE) (Enabled)

Use this item to enable the CPU energy-saving function when the system is not running.

Press <Esc> to return to the Advanced Menu page.

►SATA Configuration

Use this item to show the mode of serial SATA configuration options.



SATA Mode (AHCI Mode)

Use this item to select SATA mode.

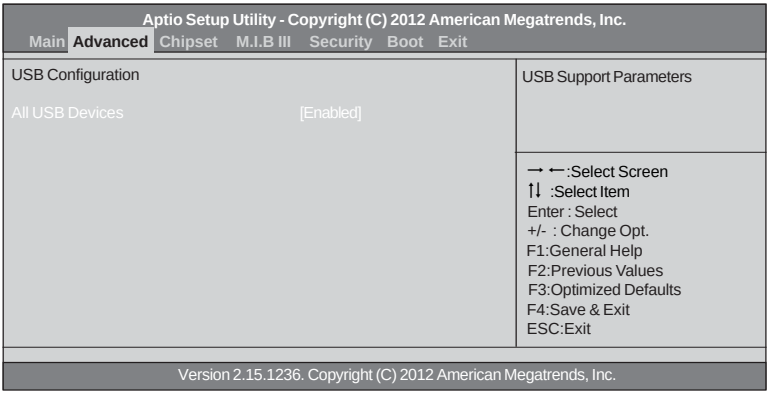
SATA Port1/2 (Hitachi HD S721 (750.1 G/Not Present)

This motherboard supports two SATA channels, and each channel allows one SATA device to be installed. These items will display the information of devices installed.

Press <Esc> to return to the Advanced Menu page.

►USB Configuration

Use this item to show the information of USB configuration.



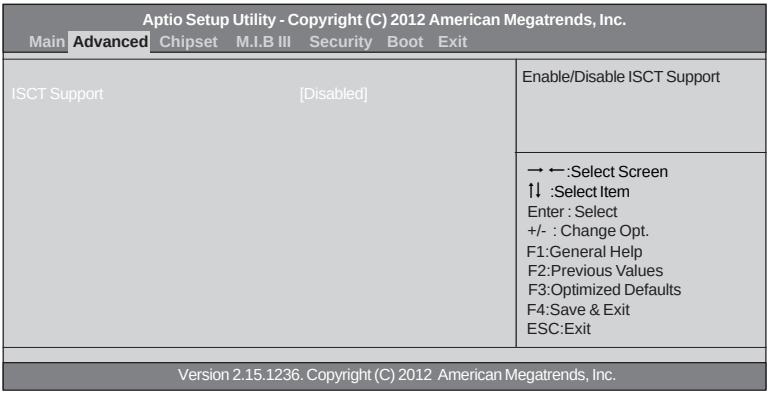
All USB Devices (Enabled)

Use this item to enable or disable all USB devices.

Press <Esc> to return to the Advanced Menu page.

►Intel (R) Smart Connect Technology

Use this item to show the information of Intel (R) Samrt Connect Technology.



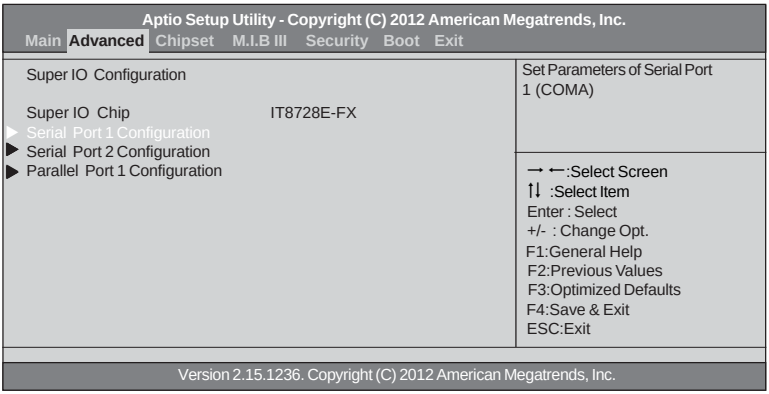
ISCT Support (Disabled)

Use this item to enable or disable ISCT Support.

Press <Esc> to return to the Advanced Menu page.

▶Super IO Configuration

Use this item to show the information of Super IO configuration.

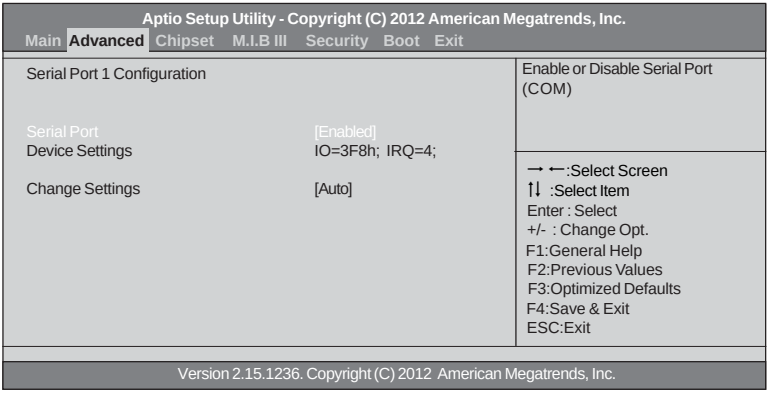

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Super IO Configuration
Super IO Chip IT8728E-FX
Serial Port 1 Configuration
Serial Port 2 Configuration
Parallel Port 1 Configuration
Set Parameters of Serial Port 1 (COMA)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

Super IO Chip (IT8728E-FX)

This item shows the information of the super IO chip.

▶Serial Port 1 Configuration

Scroll to this item and press <Enter> and view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Serial Port 1 Configuration
Serial Port [Enabled]
Device Settings IO=3F8h; IRQ=4;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=3F8h; IRQ=4)

This item shows the information of the device settings.

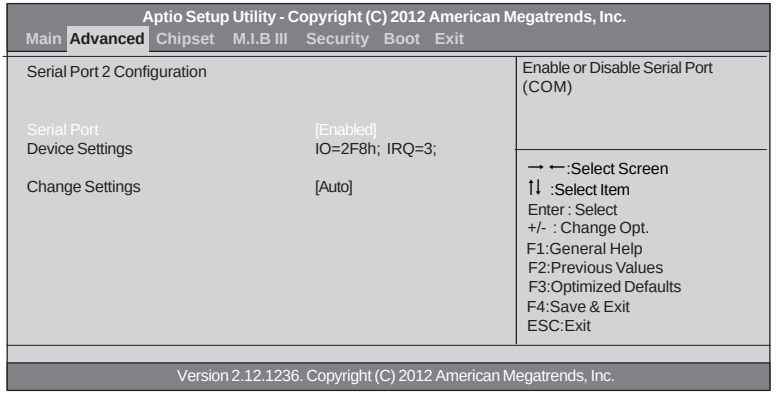
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶Serial Port 2 Configuration

Scroll to this item and press <Enter> and view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Serial Port 2 Configuration
Serial Port [Enabled]
Device Settings IO=2F8h; IRQ=3;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.12.1236. Copyright (C) 2012 American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=2F8h; IRQ=3)

This item shows the information of the device settings.

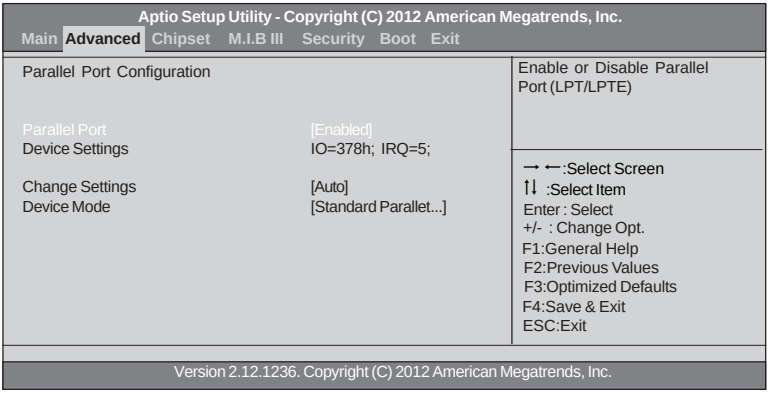
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶**Parallel Port 1 Configuration**

Scroll to this item and press <Enter> and view the following screen.



Parallel Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=378h; IRQ=5)

This item shows the information of the device settings.

Change Settings (Auto)

Use this item to change device settings.

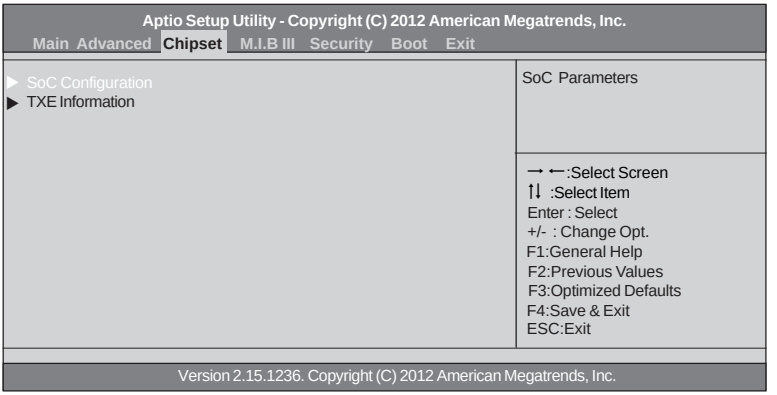
Device Mode (Standard Parallet...)

This item is used for Printer port mode selection, it can be set to Standard Parallel Port Mode (SPP) or EPP Mode.

Press <Esc> to return to the Super IO Configuration page.

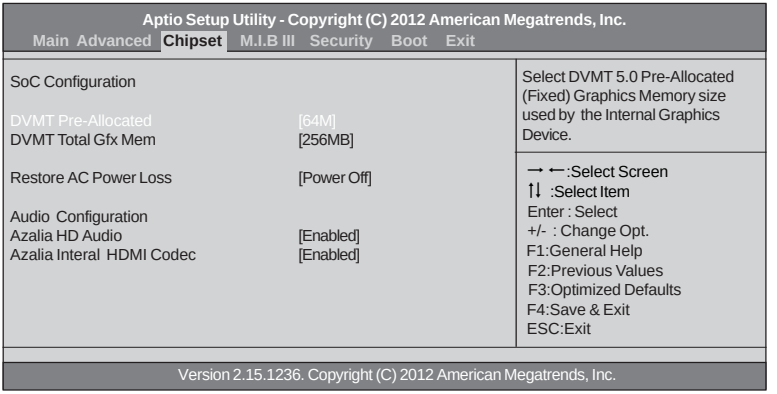
Chipset Menu

The chipset menu items allow you to change the settings for the SoC chip and other system.



►SoC Configuration

Scroll to this item and press <Enter> and view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
SoC Configuration
DVMT Pre-Allocated [64M]
DVMT Total Gfx Mem [256MB]
Restore AC Power Loss [Power Off]
Audio Configuration
Azalia HD Audio [Enabled]
Azalia Interal HDMI Codec [Enabled]
Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

DVMT Pre-Allocated (64M)

This item is used to select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

DVMT Total Gfx Mem (256MB)

This item shows the information of DVMT 5.0 total graphic memory size used by Internal Graphics Device.

Restore AC Power Loss (Power Off)

This item enables your computer to automatically restart or return to its operating status.

Azalia HD Audio (Enabled)

This item enables or disables Azalia HD audio.

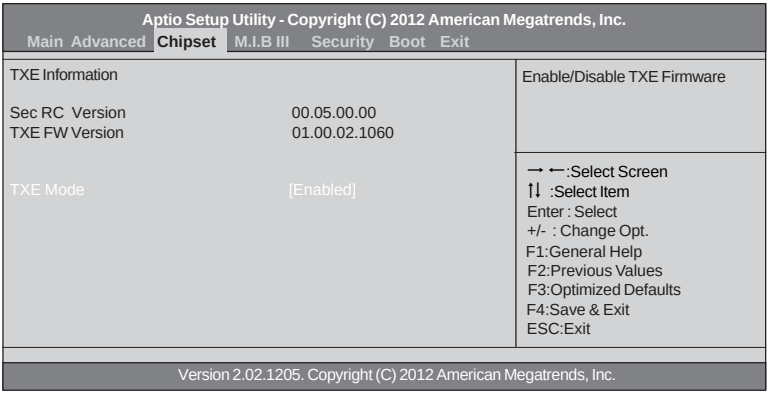
Azalia internal HDMI Codec (Enabled)

This item enables or disables Azalia internal HDMI codec.

Press <Esc> to return to the Chipset Menu page.

▶TXE Information

Scroll to this item and press <Enter> to view the following screen.



Sec RC Version (00.05.00.00)

This item shows the Sec Reference Code Version.

TXE FW Version (01.00.02.1060)

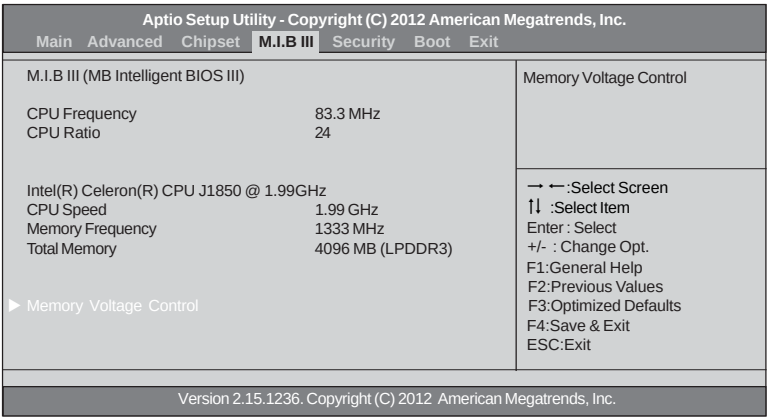
This item shows the TXE Firmware Version.

TXE Mode (Enabled)

This is TXE mode control item, it is used to enable or disable the TXE firmware.

M.I.B III (MB Intelligent BIOS III) Menu

This page displays the information of clock speeds and enables you to set the memory voltage for your system. The clock speeds are determined by the kind of processor installed in your system.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
M.I.B III (MB Intelligent BIOS III)
CPU Frequency 83.3 MHz
CPU Ratio 24
Intel(R) Celeron(R) CPU J1850 @ 1.99GHz
CPU Speed 1.99 GHz
Memory Frequency 1333 MHz
Total Memory 4096 MB (LPDDR3)
► Memory Voltage Control
Memory Voltage Control
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

CPU Frequency (83.3 MHz)

This item shows the frequency of CPU reference clock.

CPU Ratio (24)

This item shows the max CPU ratio supported.

Intel(R) Celeron(R) CPU J1850 @ 1.99 GHZ

This is display-only field and displays the information of the CPU installed in your computer.

CPU Speed (1.99 GHz)

This item shows the CPU speed.

Memory Frequency (1333 MHz)

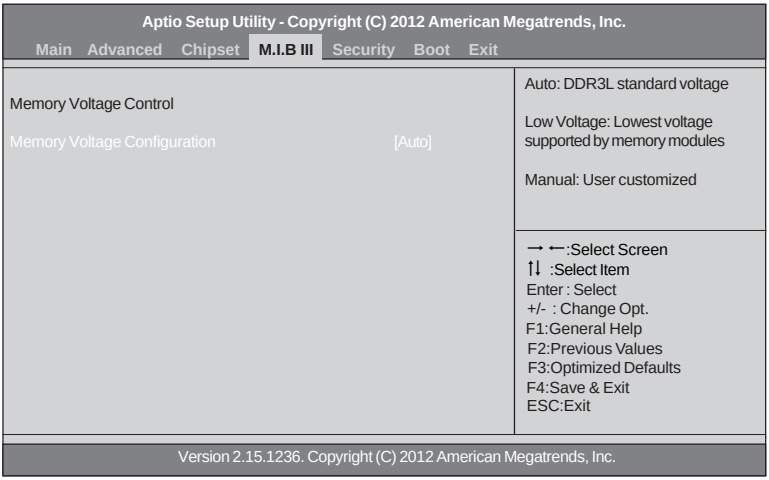
This item shows the memory frequency.

Total Memory (4096 MB (LPDDR3))

This item shows the total memory.

▶**Memory Voltage Control**

Scroll to this item to view the following screen:

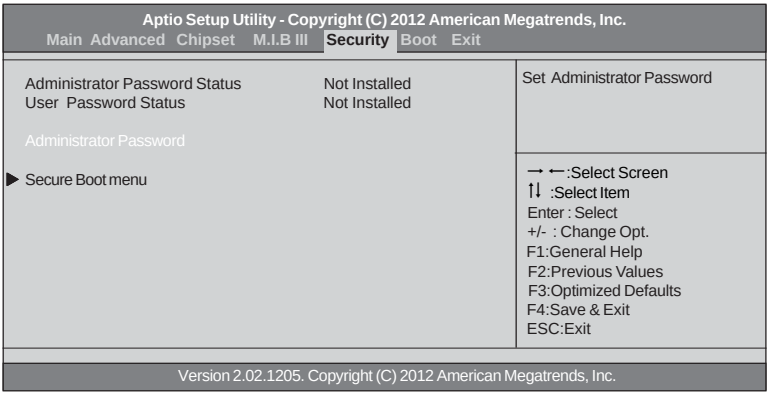

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Memory Voltage Control
Memory Voltage Configuration [Auto]
Auto: DDR3L standard voltage
Low Voltage: Lowest voltage supported by memory modules
Manual: User customized
→←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.

Memory Voltage Configuration (Auto)

This item provides 3 configuration modes for the voltage of memory modules. Auto: Always provide DDR3L standard voltage (1.35V). Low Voltage: Provide the lowest voltage memory module supported. Manual: User customized (provide 1.35V or 1.50V).

Security Menu

This page enables you to set setup administrator and password.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Administrator Password Status Not Installed
User Password Status Not Installed
Administrator Password
▶ Secure Boot menu
Set Administrator Password
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Administrator Password Status (Not Installed)

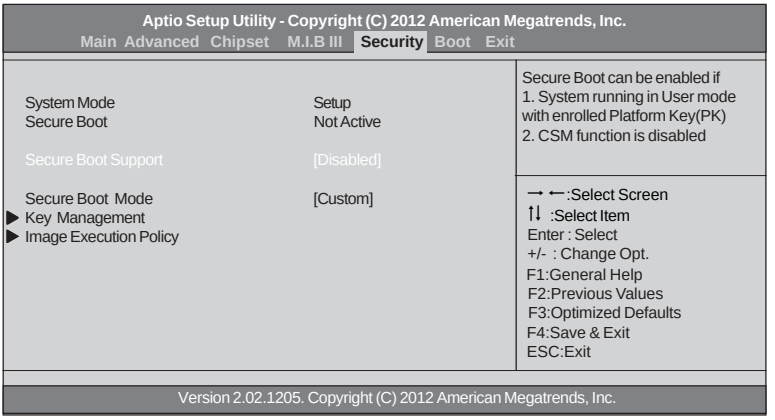
This item shows administrator password installed or not.

User Password Status (Not Installed)

This item shows user password installed or not.

▶Secure Boot menu

Scroll to this item and press <Enter> to view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
System Mode Setup
Secure Boot Not Active
Secure Boot Support [Disabled]
Secure Boot Mode [Custom]
▶ Key Management
▶ Image Execution Policy
Secure Boot can be enabled if
1. System running in User mode with enrolled Platform Key(PK)
2. CSM function is disabled
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

System Mode (Setup)

This item shows system of secure boot (can be setup or user).

Secure Boot (Not Active)

This item shows the active state of secure boot.

Secure Boot Support (Disabled)

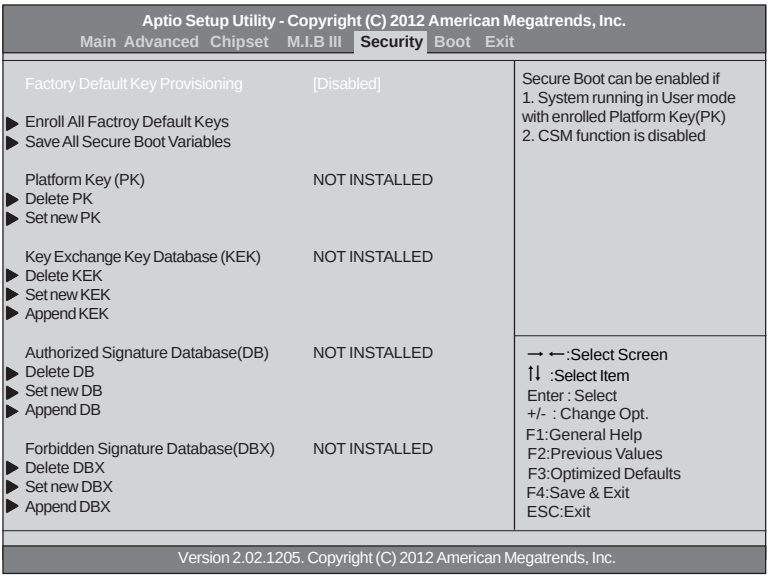
Use this item to enable or disable secure boot mode of BIOS. And the secure boot can be enabled if system running in user mode with enrolled platform key (PK) or CSM function is disabled.

Secure Boot Mode (Custom)

This item is used to select secure boot mode, when you select standard mode, secure boot policy is fixed; when you select custom mode, the image execution policy and secure boot key databases are changeable.

▶Key Management

Scroll to this item and press <Enter> to view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Factory Default Key Provisioning [Disabled]
▶ Enroll All Factroy Default Keys
▶ Save All Secure Boot Variables
Platform Key (PK) NOT INSTALLED
▶ Delete PK
▶ Set new PK
Key Exchange Key Database (KEK) NOT INSTALLED
▶ Delete KEK
▶ Set new KEK
▶ Append KEK
Authorized Signature Database(DB) NOT INSTALLED
▶ Delete DB
▶ Set new DB
▶ Append DB
Forbidden Signature Database(DBX) NOT INSTALLED
▶ Delete DBX
▶ Set new DBX
▶ Append DBX
Secure Boot can be enabled if
1. System running in User mode with enrolled Platform Key(PK)
2. CSM function is disabled
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Factory Default Key Provisioning (Disabled)

Use this item to install factory default secure boot keys when system is in setup mode.

Enroll All Factory Default Keys

Use this item to force system to user mode--install all factory default keys (PK, KEK, DB, DBX, DBT). And the change takes effect after reboot.

Save All Secure Boot Variables

Use this item to store content of each secure boot variable (data formatted as EFI_SIGNATURE_LIST) to a file with matching name on selected file system's root folder.

Platform Key(PK) (NOT INSTALLED)

This item shows the information of the platform key.

Delete PK/KEK/DB/DBX

This item is used to delete the variable.

Set new PK/KEK/DB/DBX

These items launche the file brower to set Efi Variable from the file. The file data must be formatted as Efi Variable with TimeBased Authenticated Header.

Key Exchange Key Database(KEK)/Authorized Signature Database(DB)/Frobidden Signature Database(DBX) (NOT INSTALLED)

These items shows the Key Exchange key database(KEK)/Authorized Signature Database(DB)/Frobidden Signature Database(DBX) installed or not.

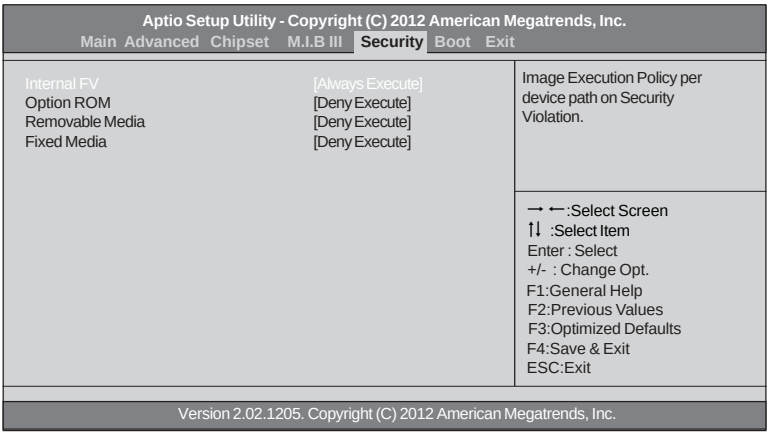
Append KEK/DB/DBX

These items launche the file browser to append new signature database from the file. The file data must be formatted as Efi Variable with TimeBased Authenticated Header.

Press <Esc> to return to the Security Menu page.

▶Image Execution Policy

Scroll to this item and press <Enter> to view the following screen.

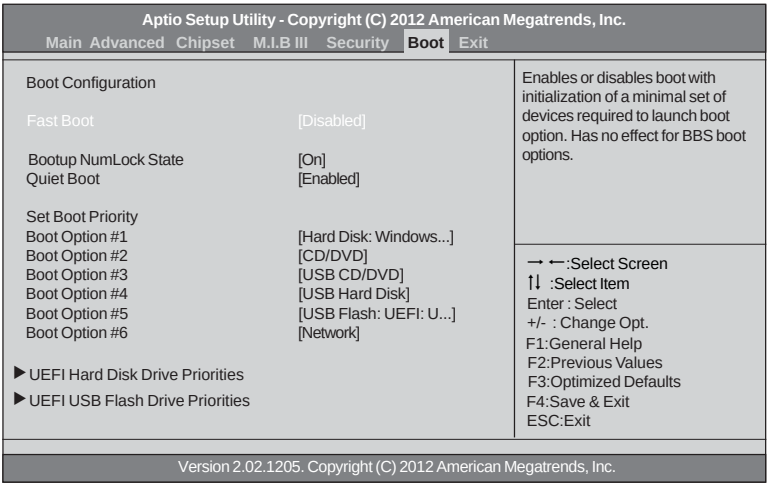

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Internal FV [Always Execute]
Option ROM [Deny Execute]
Removable Media [Deny Execute]
Fixed Media [Deny Execute]
Image Execution Policy per device path on Security Violation.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Internal FV/Option ROM/Removable Media/Fixed Media (Always Execute/Deny Execute)

These items allow you to select image execution policy per device path on security violation. Only users logged with administrative password can exercise query user policy setting.

Boot Menu

This page enables you to set the keyboard NumLock state.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Boot Configuration
Fast Boot [Disabled]
Bootup NumLock State [On]
Quiet Boot [Enabled]
Set Boot Priority
Boot Option #1 [Hard Disk: Windows...]
Boot Option #2 [CD/DVD]
Boot Option #3 [USB CD/DVD]
Boot Option #4 [USB Hard Disk]
Boot Option #5 [USB Flash: UEFI: U...]
Boot Option #6 [Network]
▶ UEFI Hard Disk Drive Priorities
▶ UEFI USB Flash Drive Priorities
Enables or disables boot with initialization of a minimal set of devices required to launch boot option. Has no effect for BBS boot options.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Fast Boot (Disabled)

Use this item to enable or disable the fast boot.

Bootup NumLock State (On)

This item enables you to select NumLock state.

Quiet Boot (Enabled)

Use this item to enable or disable the Quiet boot.

Set Boot Priority

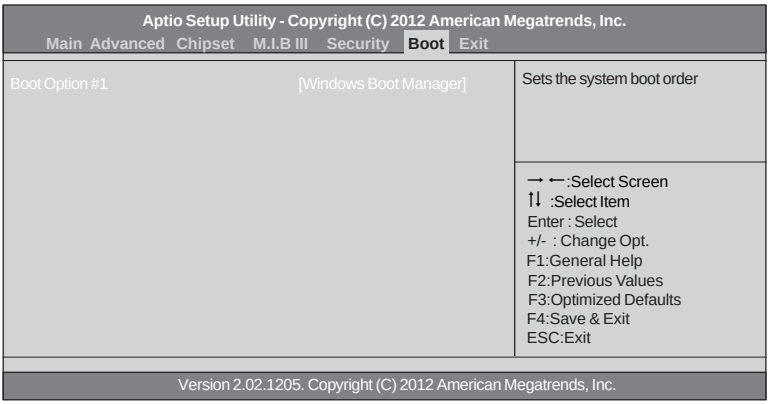
This item enables you to set boot priority for all boot devices.

Boot Option #1/ 2/ 3/ 4/ 5/ 6

These items show the boot priorities and can be used to set the boot priorities of various device categories.

▶UEFI Hard Disk Drive Priorities

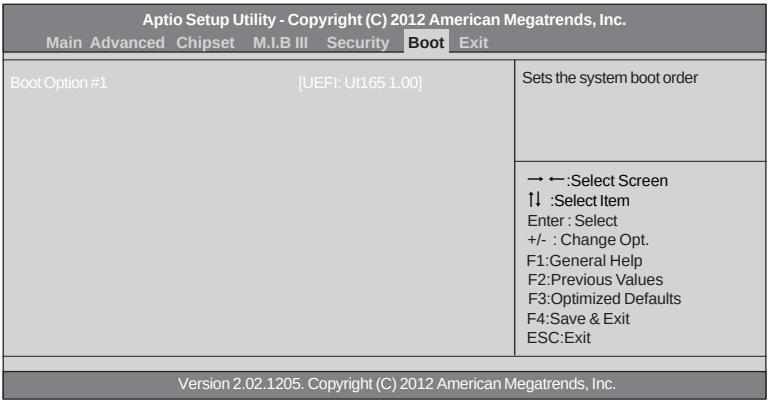
Scroll to this item and press <Enter> to view the following screen.


Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Boot Option #1
[Windows Boot Manager]
Sets the system boot order
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Press <Esc> to return to the Boot Menu page.

▶UEFI USB Flash Drive Priorities

Scroll to this item and press <Enter> to view the following screen.

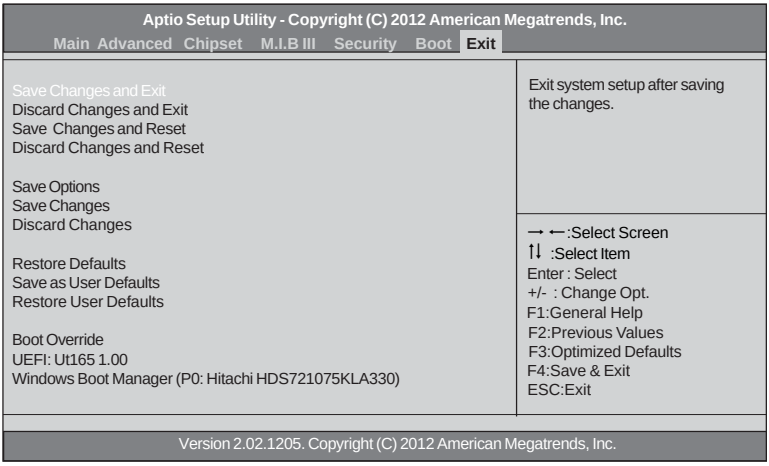

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main Advanced Chipset M.I.B III Security Boot Exit
Boot Option #1
[UEFI: Ut165 1.00]
Sets the system boot order
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.02.1205. Copyright (C) 2012 American Megatrends, Inc.

Boot Option #1 (UEFI: Ut165 1.00)

Set the order of these items to set the boot priorities of device of certain device category (Hard Disk Drive, USB Flash Drive, and etc.). Boot option #1 will be the first priority, Boot option #2 will be the second, and so on.

Exit Menu

This page enables you to exit system setup after saving or without saving the changes.



Save Changes and Exit

Use this item enables you to exit system setup after saving the changes.

Discard Changes and Exit

Use this item enables you to exit system setup without saving any changes.

Save Changes and Reset

Use this item enables you to reset the system setup after saving the changes.

Discard Changes and Reset

Use this item enables you to reset system setup without saving any changes.

Save Options

Use this item enables you to save the options that you have made.

Save Changes

Use this item enables you to save the changes that you have made.

Discard Changes

Use this item enables you to discard any changes that you have made.

Restore Defaults

Use this item enables you to restore the system defaults.

Save as User Defaults

Use this item enables you to save the changes that you have made as user defaults.

Restore User Defaults

Use this item enables you to restore user defaults to all the setup options.

Boot Override

Use this item enables you to set the device order.

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1. If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.
2. If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)
3. Prepare a bootable device or create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
4. Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the bootable device.
5. Turn off your computer and insert the bootable device in your computer. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the bootable device first.)
6. At the C:\ or A:\ prompt, type the Flash Utility program name and the file name of the new BIOS and then press <Enter>. Example: AFUDOS.EXE 040706.ROM
7. When the installation is complete, remove the bootable device from the computer and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

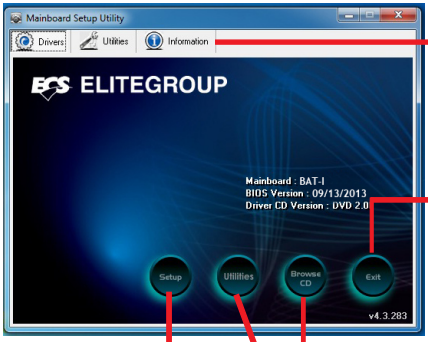
This concludes Chapter 3. Refer to the next chapter for information on the software supplied with the motherboard.

Chapter 4

Using the Motherboard Software

Auto-installing under Windows XP/7/8

The auto-install DVD-ROM makes it easy for you to install the drivers and software. The support software DVD-ROM disc loads automatically under Windows XP/7/8. When you insert the DVD-ROM disc in the DVD-ROM drive, the auto-run feature will automatically bring up the installation screen. The screen has four buttons on it: **Setup**, **Utilities**, **Browse CD** and **Exit**.



Information:
Displays the path for all software and drivers available on the disk.

Click "**Exit**" button to close the Auto-Setup window.

Browse CD:
Open Windows Explorer and show the contents of the support disk.

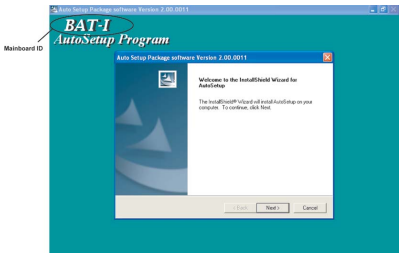
Click the "**Setup**" button to select and run the software installation program.

Click the "**Utilities**" button to select and install ECS Intelligent Utility.

Running Setup

Follow these instructions to install device drivers and software for the motherboard:

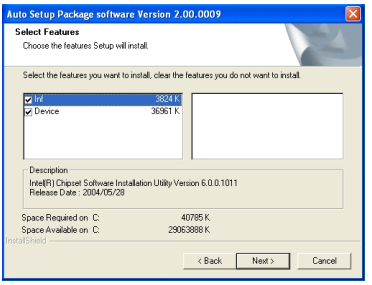
1. Click **Setup**. The installation program begins:



The following screens are examples only. The screens and driver lists will be different according to the motherboard you are installing.

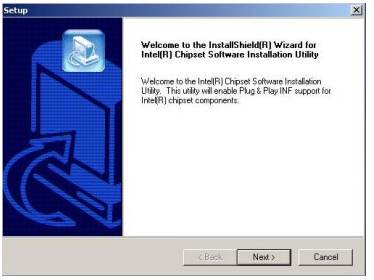
The motherboard identification is located in the upper left-hand corner.

2. Click **Next.** The following screen appears:


Auto Setup Package software Version 2.00.0009
Select Features
Choose the features Setup will install.
Select the features you want to install, clear the features you do not want to install.
Inf 3824 K
Device 36961 K
Description
Intel(R) Chipset Software Installation Utility Version 6.0.0.1011
Release Date : 2004/05/28
Space Required on C: 40795 K
Space Available on C: 29063888 K
InstallShield
< Back
Next >
Cancel

3. Check the box next to the items you want to install. The default options are recommended.

4. Click **Next** to run the Installation Wizard. An item installation screen appears:

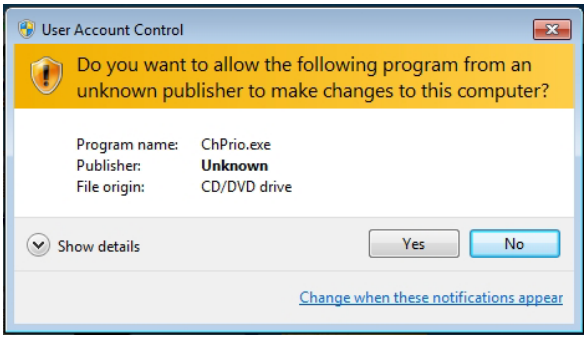

Setup
Welcome to the InstallShield(R) Wizard for Intel(R) Chipset Software Installation Utility
Welcome to the Intel(R) Chipset Software Installation Utility. This utility will enable Plug & Play INF support for Intel(R) chipset components.
< Back
Next >
Cancel

5. Follow the instructions on the screen to install the items.

Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to re-start a few times to complete the installation.

Windows 8 will show the following screen after system restart, you must select "Desktop" in the bottom left to install the next driver.

Windows 7/8 will appear below UAC (User Account Control) message after the system restart. You must select "Yes" to install the next driver. Continue this process to complete the drivers installation.


User Account Control
Do you want to allow the following program from an unknown publisher to make changes to this computer?
Program name: ChPrio.exe
Publisher: Unknown
File origin: CD/DVD drive
Show details
Yes
No
Change when these notifications appear

Manual Installation

If the auto-install DVD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Look for the chipset and motherboard model, and then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

ECS Utility Software (Intelligent EZ Utility) (Optional)

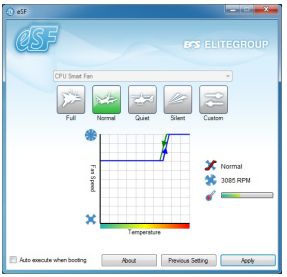
ECS Intelligent EZ Utility provides friendly interfaces under Windows O.S, which makes your computing more easily and conveniently.

These software(s) are subject to change at anytime without prior notice. Please refer to the support disk for available software.

eSF

eSF(Smart Fan) utility provides easy and safe way to adjust fan speed in accordance with your PC's system loading and temperature.

It has five modes to adjust fan speed in a safe range without entering the BIOS to optimize your system cooling environment.



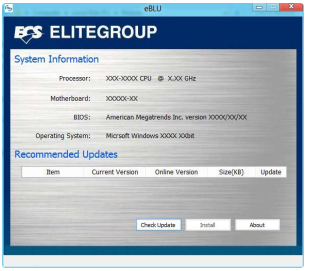
Microsoft .NET Framework 3.5 is required.

eDLU

ECS eDLU utility makes updating drivers fast and easy. eDLU saves time and hassle by listing all the latest drivers online. Just select the one you prefer and start to download and install the drivers.

eBLU

ECS eBLU utility makes BIOS update faster and easier. eBLU will list the latest BIOS with a default check-mark. Click"install" button to install.



Microsoft .NET Framework 3.5 is required.

Chapter 5
Trouble Shooting

Start up problems during assembly

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips. You may also log onto our ECS website for more information: *http:// www.ecs.com.tw/ECSWebSite/Support/Support_FAQ.aspx?MenuID=49&childid=M_49&LanID=0*

a) System does not power up and the fans are not running.

1. Disassemble the PC to remove the VGA adaptor card, DDR memory, LAN, USB and other peripherals including keyboard and mouse. Leave only the motherboard, CPU with CPU cooler and power supply connected. Make sure the power cord is plugged into the wall socket & the switch on the Power Supply Unit (PSU) is turned " on " as well. Turn on again to see if the CPU and power supply fans are running.

2. Make sure to remove any unused screws or other metal objects such as screwdrivers from the inside PC case. This is to prevent damage from short circuit.

3. Check the CPU FAN connector is connected to the motherboard.

4. For Intel platforms check the pins on the CPU socket for damage or bent. A bent pin may cause failure to boot and sometimes permanent damage from short circuit.

b) Power is on, fans are running but there is no display

1. Make sure the monitor is turned on and the monitor cable is properly connected to the PC.

2. Check the VGA adapter card (if applicable) is inserted properly.

3. Listen for beep sounds. If you are using internal PC speaker make sure it is connected.
   a. continuous 3 short beeps: memory not detected
   b. 1 long beep and 8 short beeps: VGA not detected

c) The PC suddenly shuts down while booting up.

1. The CPU may experience overheating so it will shutdown to protect itself. Apply the thermal grease onto the CPU heatsink & ensure the CPU fan is well-connected with the CPU heatsink. Check if the CPU fan is working properly while the system is running.

2. From the BIOS setting, try to disable the Smartfan function to let the fan run at default speed. Doing a Load Optimised Default will also disable the Smartfan.

Start up problems after prolong use

After a prolong period of use your PC may experience start up problems again. This may be caused by breakdown of devices connected to the motherboard such as HDD, CPU fan, etc. The following tips may help to revive the PC or identify the cause of failure.

1. Clear the CMOS values using the CLR_CMOS jumper. Refer to CLR_CMOS jumper in Chapter 2 for Checking Jumper Settings in this user manual. When completed, follow up with a Load Optimised Default in the BIOS setup.

2. Check the CPU cooler fan for dust. Long term accumulation of dust will reduce its effectiveness to cool the processor. Clean the cooler or replace a new one if necessary.

3. Remove the hard drive, optical drive or DDR memory to determine which of these components may be at fault.

4. Check whether there is any bulked up electrolytic capacitor or abnormal component.

Please logo onto our ECS website: http://www.ecs.com.tw/ECSWebSite/Support/Technical_Support_List.aspx?MenuID=50&LanID=0 for more information.

Maintenance and care tips

Your computer, like any electrical appliance, requires proper care and maintenance. Here are some basic PC care tips to help prolong the life of the motherboard and keep it running as best as it can.

1. Keep your computer in a well ventilated area. Leave some space between the PC and the wall for sufficient airflow.

2. Keep your computer in a cool dry place. Avoid dusty areas, direct sunlight and areas of high moisture content.

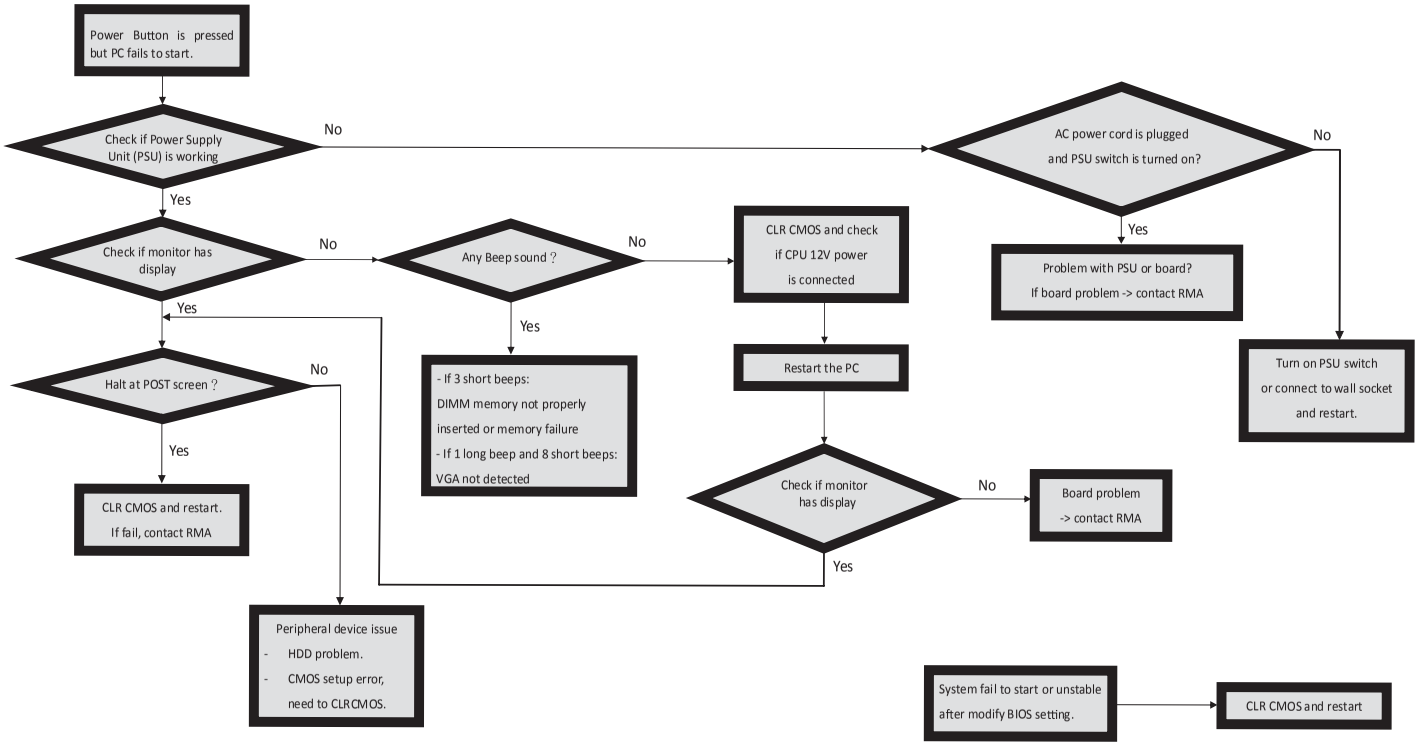
3. Routinely clean the CPU cooler fan to remove dust and hair.

4. In places of hot and humid weather you should turn on your computer once every other week to circulate the air and prevent damage from humidity.

5. Add more memory to your computer if possible. This not only speeds up the system but also reduces the loading of your hard drive to prolong its life span.

6. If possible, ensure the power cord has an earth ground pin directly from the wall outlet. This will reduce voltage fluctuation that may damage sensitive devices.

Basic Troubleshooting Flowchart


Power Button is pressed but PC fails to start.
Check if Power Supply Unit (PSU) is working
No
Yes
AC power cord is plugged and PSU switch is turned on?
No
Yes
Problem with PSU or board? If board problem -> contact RMA
Turn on PSU switch or connect to wall socket and restart.
Check if monitor has display
No
Yes
Any Beep sound ?
No
Yes
- If 3 short beeps: DIMM memory not properly inserted or memory failure
- If 1 long beep and 8 short beeps: VGA not detected
CLR CMOS and check if CPU 12V power is connected
Restart the PC
Check if monitor has display
No
Yes
Board problem -> contact RMA
Halt at POST screen ?
No
Yes
CLR CMOS and restart. If fail, contact RMA
Peripheral device issue
- HDD problem.
- CMOS setup error, need to CLRCMOS.
System fail to start or unstable after modify BIOS setting.
CLR CMOS and restart

Memo